CLAIMS

1.   An apparatus for registering a mobile node operating in a visited network,
comprising:
       a memory element; and
       a processor configured to execute a set of instructions stored within the
memory element, the set of instructions for:
              performing an initial registration with a foreign agent in the visited
              network;
              if an IP packet is transferred within a predetermined time period,
              then following a standard protocol;
              if an IP packet is note transferred within the predetermined time
              period, then refraining from performing a re-registration with the foreign
              agent, wherein refraining from performing the re-registration is contrary to
              the standard protocol; and
                    if an IP packet is transferred after the predetermined time
                    period expires and before the registration lifetime expires, then
                    transmitting a re-registration request.

2.   An apparatus for re-registering a mobile node with a foreign agent,
comprising:
       a memory element; and
       a processor configured to execute a set of instructions stored within the
memory element, the set of instructions for:
              performing a registration with the foreign agent wherein a
              registration lifetime is set;
              refraining from performing a re-registration if a pre-determined
              period, which is less than the registration lifetime, has expired and no
              packet has been transmitted or received at the mobile node; and

performing a re-registration only if a packet is transmitted or
12   received after a successful registration and before the expiration of the
registration lifetime

3.   An apparatus for registering a mobile node operating in a visited network,
2   comprising:

registration means for performing an initial registration and subsequent
4   re-registrations of the mobile node with a foreign agent in the visited network;
and

6   timing means for use with the registration means, wherein the registration
means uses the timing means to determine whether to follow a standard
8   protocol or to disregard the standard protocol, wherein disregarding the
standard protocol is to refrain from performing the re-registration of the mobile
10   node.

4.   A method for re-registering a mobile node with a foreign agent,
2   comprising:

performing an initial registration with a foreign agent in the visited
4   network;

if an IP packet is transferred between the mobile node and the foreign
6   agent within a predetermined time period, then following a standard protocol;

if an IP packet is not transferred within the predetermined time period,
8   then refraining from performing a re-registration with the foreign agent, wherein
refraining from performing the re-registration is contrary to the standard
10   protocol; and

if an IP packet is transferred after the predetermined time period and
12   before the expiration of a registration lifetime, then transmitting a re-registration
request.

5.   A method for minimizing the impact of registration requests from a
2   travelling mobile node, comprising:

performing initial registration with the foreign agent wherein a lifetime is
4   set;

refraining from performing a re-registration if a pre-determined period,
6   which is less than the registration lifetime, has expired and no packet has been
transmitted or received; and

8   performing a re-registration only if a packet is transmitted or received
after the expiration of the pre-determined period and before the expiration of the
10 registration lifetime.